3: Temple G-5 (1901) 1903 AZ2 Andamans AZ2

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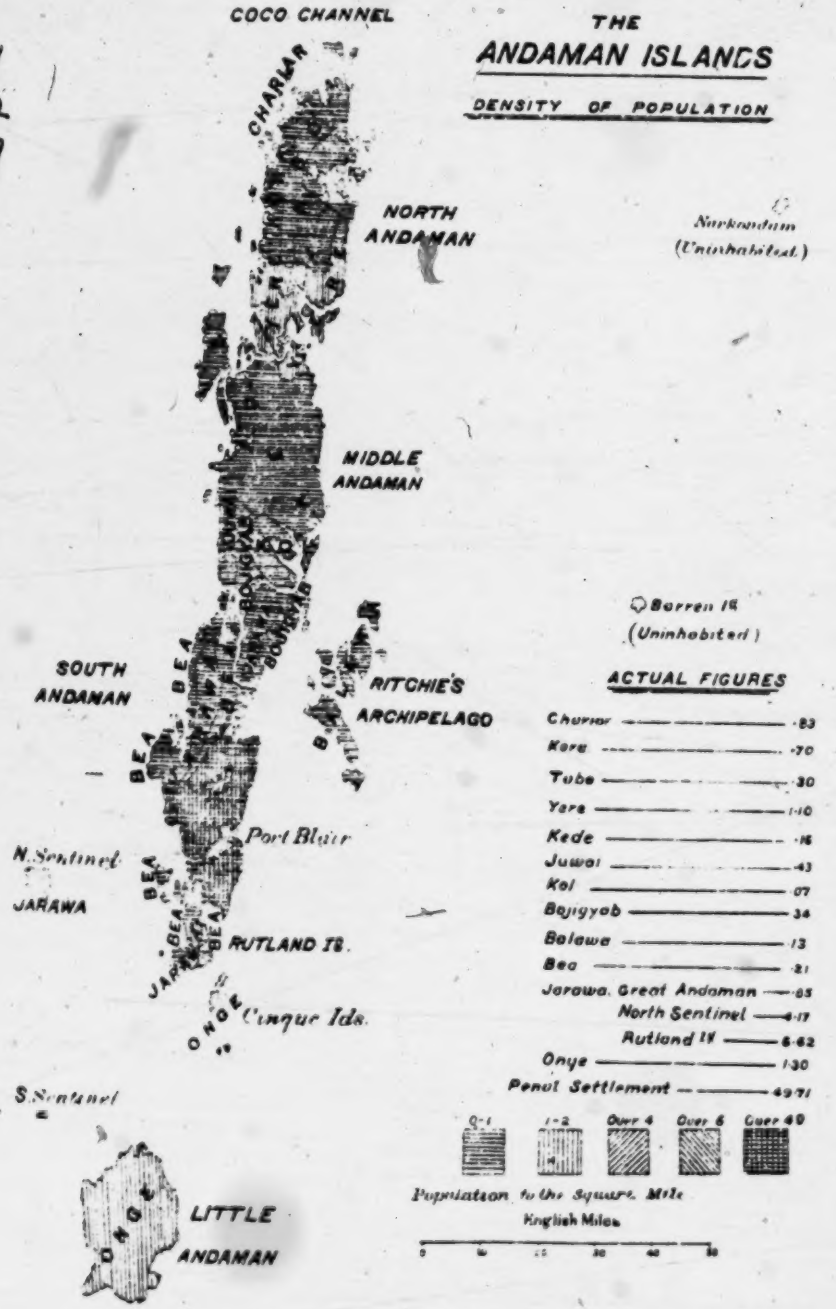

[facing p. 6]

ANDAMAN ISLANDS.

FIGURES FOR THE ABORIGINES CENSUS, 1901.

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Name of Tribe.	Adults.		Children.		Total.	Occupied area in square miles.	Density per square mile.
	Male.	Female.	Male.	Female.			
	No.	No.	No.	No.	No.	No.	
Chăriăr	16	15	6	2	39	47	·83
Kŏrà	31	32	14	19	96	137	·70
Tăbŏ	15	16	7	10	48	158	·30
Yĕre	98	80	26	14	218	198	1·10
Kede	24	30	3	2	59	371	·16
Jŭwai	21	19	7	1	48	110	·43
Kŏl	6	2	3	...	11	161	·07
Bojigyăb	31	14	2	3	50	148	·34
Balawa	5	10	3	1	19	141	·13
Bĕa	14	16	3	4	37	117	·21*
Jarawa	280	210	55	40	585	220	2·66
Ŏnge	303	273	63	33	672	373	1·80
TOTAL	844	717	192	129	1,882	2,181*	·86

* Excluding occupied area of the Settlement 327 square miles.

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In the above table the Jarawas should be divided between the Great Andaman, North Sentinel and Rutland Island. Thus divided, the special table for them is as under :—

JARAWAS.

	Occupied area in square miles.	Population.	Density per square mile.
In Great Andaman	139	117	0·85
In North Sentinel	28	117	4·17
In Rutland Island	53	351	6·62

The density figure thus arrived at is, I think, about right for the Great Andaman and I am not prepared to say that it is far wrong for the North Sentinel, but it is probably a good deal too high for Rutland Island, *i.e.*, it would appear from this argument that the whole population of the Jarawas have been placed at too high a figure.

It will be noted that the above figures give a density of population among the aborigines of less than one per square mile, *not* an unlikely fact. Commenting generally on these returns I should say that the figures for the Kede, Juwai, Kol, Bojigyab, Balawa and Bea tribes are right; so much is known about them that statements of the people as to themselves are not difficult to check. But I think it likely that the Chariar children are understated. I am not prepared to be positive as to this, however, as this Tribe, too, is well known and understood. The Yere children are probably much understated, though from what is known of this Tribe it is likely that the adults are greatly in excess of the children.

I was present when in 1900 the Kora were discovered, or to speak more accurately differentiated. They had been previously well known, themselves and their encampments, but had been considered to belong to the Chariar. The discovery as to the true facts—that they were a separate Tribe with a territory and language of their own—so late as 1900 is an example of the difficulty in procuring accurate information from such primitive savages as the Andamanese. It mattered nothing to them that Kora men and women had been to the Home at Port Blair and had been classed as Chariar. All they thought of the matter was that the sahibs held them to be Chariar, but that they and all the Andamanese knew better! In this case I think it likely that a similar error has been made as regards the children as in the case of the Yere Tribe.

In regard to the Tabo of the interior of the North Andaman, whose existence was unsuspected by us until the Census, the figures given must be taken with some caution, despite the native explanation of the cause of the destruction of

3: Temple G-5 (1901) 1903 AZ2 Andamans AZ2

162 619 the Tribe, that they killed each other off in consequence of the introduction of contagious disease amongst them by the Chariar or Kora Tribes. It is somewhat difficult to believe that even a savage Tribe would actually kill off the sick to such an extent as to reduce themselves to half a dozen families or hunting camps. Even then the children would not be affected by the process and should in such case be much more numerous than the adults, but they are recorded as being in a minority of nearly 55 %. It is probable that both the figures for the adults and the children are in this case understated.

Criticisms on the figures for Ŏnges and Jarawas have already been made.

Taken all round, however, the totals for the whole of the Andamans are not likely on the above grounds to be very far wrong and to my mind an estimate of 2,000 is about correct for the existing population of this primeval and most interesting race. At the next Census it will possibly be practicable to arrive at more accurate figures in the light of the present experience by carefully considering how the defects noticed on this occasion can be remedied.

161 162 619 **Former Population.**—It has been well known for years past that the Andamanese population was even a generation ago far more numerous than it is now and proceeding on the general principles followed in the remarks above made, it seems to me that a fairly accurate estimate of the old normal population can be arrived at. The principles governing the estimate would be—

(1) the population has always been stationary,
(2) the population has been limited by habits as to food production and by the area of productive occupation,
(3) the relative size of the Tribes as gauged by their present strength combined with exposure to devastating contagious or infectious diseases,
(4) the capacity of each Tribe to hold its own with neighbouring Tribes.

On these grounds I estimate the combined Ŏnge-Jarawa Tribe as having been always of its present estimated strength and the other Tribes as under, keeping to the further principle that the adults and children have always been about equal and that the sexes also have been about equal: preponderance in favour of women over men and of male over female children.

ANDAMAN ISLANDS.

ESTIMATES OF THE OLD NORMAL POPULATION.

Name of Tribe.	Adults.		Children.		Total.	Occupied area in square miles.	Density per square mile.
	Male.	Female.	Male.	Female.			
Chăriăr .	20	25	30	25	100	47	2·13
Kŏrā . .	105	120	140	135	500	137	3·65
Tăbŏ . . .	40	50	60	50	200	158	1·27
Yĕre . . .	150	165	200	185	700	198	3·50
Kede . .	105	120	140	135	500	371	1·35
Jûwai .	60	75	90	75	300	110	2·73
Kŏl . .	20	25	30	25	100	161	0·62
Bojigyăb . .	60	75	90	75	300	148	2·03
Balawa . .	60	75	90	75	300	141	2·12
Bĕa . . .	105	120	140	135	500	444 *	1·13
Jarawa . .	130	140	170	160	600	220 †	2·73
Ŏnge . .	150	165	200	185	700	373	1·88
	1,005	1,155	1,380	1,260	4,800	2,508	1·91

Males—2,385 Females—2,415 = Total 4,800.
Adults—2,160 Children—2,640 = Total 4,800.

* Including 327 square miles now occupied by the Penal Settlement.

† The Jarawa density being divided up as per foot-note to paragraph thus:—

(96) Great Andaman.
(17) South Sentinel.
(107) Rutland.

3: Temple G-5 (1901) 1903 AZ2 Andamans AZ2

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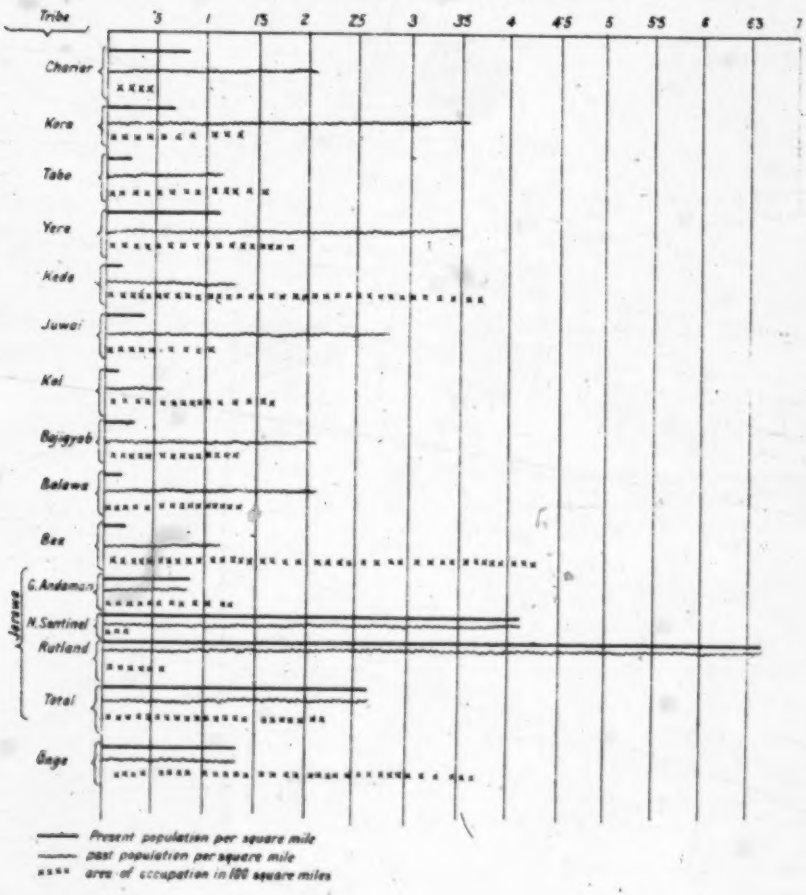
I feel pretty sure that the indigenous population of the Andaman Islands was at no time higher than 5,000 and that it was for many centuries stationary. The density figures also work out to about two to the square mile and that, too, I think a reasonable figure to adopt for the old indigenous population before contact with Europeans.

Diagram of Past and Present Density.—Proceeding to put the conjectures arrived at above to the further test of a diagram illustrating the present and past assumed density of the Andamanese Tribes compared with the area actually occupied by each Tribe, the following facts are arrived at.

DIAGRAM ILLUSTRATING PRESENT AND PAST ASSUMED DENSITY OF THE POPULATION OF THE ANDAMANESE TRIBES WITH AREA OCCUPIED BY EACH.



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From this diagram it becomes pretty evident that the Jarawa population for Rutland Island has been assumed at too high a figure, both for the past and present time. At the same time I think that it is equally probable that the population of the Onges has been underestimated. Taking all the calculations and known facts into consideration, my own opinion is that the assumptions for the Andaman population as a whole, both for the past and the present are probably near the truth, but that we should decrease the Jarawa estimate for Rutland Island (and to that extent the whole Jarawa population) by 100, and increase the Onge estimate by 100.

Method of arriving at Former Density.—Portman, *History of our relations with the Andamanese*, Volume I, page 16, gives the following reasons for holding the Andamanese population to have been formerly stationary:—

"When we consider that some Andamanese have no children, very few have more than three, the majority of the children die in infancy, and the grown-up Andamanese revenges the slightest injury to his person or property or even a fancied insult by a murder and also that the Tribes were continually at feud with each other, I think we may say the above estimated population (his estimate is 8,000) to be the average for many centuries past."

This is an overstatement, as in the first place it is necessary in a stationary population for each couple to produce on an average two children, who grow up and produce again in their turn, and in the next place, though an Andamanese will murder on, to us, extremely slight provocation, he is not a murderous variety of mankind and in tribal "wars" the bloodshed at each collision is very small indeed. In the next place, as Portman himself observes, the average number of children to a married woman was three, while instances of seven and eight children of one mother have been recorded. The statement is however an interesting one, as an observation on these primitive savages and their ways and as indicating the causes for the population being kept stationary.

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The Kitchen-Middens.—Portman also points out (*op. cit.*, p. 17) that an estimate of the old population can be arrived at from locating and enumerating the existing kitchen-middens of the Andamanese, on the assumptions that each midden represents the head-quarters of a Sept of 30 people and that apparently each Sept, owing to the habits of the people, would require four to five such head-quarters. A population of 5,000 would therefore require, say, 600 middens, *i.e.*, there should be a midden to every four square miles of territory.

The value of the kitchen-midden argument comes out thus:—(1) The size, 50 feet diameter usually, does not permit more than 30 people to live on it; (2) change of head-quarters is frequently necessary owing to (*a*) monsoons, (*b*) exhaustion of food in the neighbourhood, (*c*) nomadic instincts, (*d*) stench from discarded food thrown around. As a matter of practice the Andamanese do not return for three months after they have left a midden, nor for about a year after a death in one, and occasionally they abandon a midden for many years, and cannot occupy one for more than a few weeks at a time from the stench about it. These considerations fix four as the smallest number of middens per 30 people.

The middens also beyond all doubt prove that the Andamanese are now as they were an exceedingly long time ago. There are but few "newer" middens, and the older ones show great age: newness and age being gauged by height. The antiquity of the old middens is proved by the fossil shells at the base. Now, except that certain shell-fish have been fashionable at one period and certain others at another, the kitchen-middens show that the Andamanese finds his food to-day as he did in the days when the now fossilised shells contained food for him. At the base of the middens are found the same refuse and the same pottery as we find shown on the surface to-day.

Here then we have a people unaltered in habits from primeval time and whose numbers, if these premises be correct, we should be able to estimate from existing data, as they must have been stationary through all time.

The questions on this argument really are therefore:—(1) how many middens are there? (2) where are they? To these questions it is worth while obtaining answers at the next Census or even as opportunity occurs, as the answers will either upset the theory or afford an approximate estimate of the old Andamanese population and of the strength of each tribe.

crew of the ship called him 'Raja' and we adopted this name (*see* Plate IV, Figs. 1 & 2). He was the only one among the Onges who was fully armed with knives, bows and arrows. Among the contents of the canoes, we found complete fishing out-fits, bows and arrows, ropes and nautilous shells, for bailing out water. There was also a kind of bamboo float about 1½ ft. long, probably used for turtle fishing. We gave them food, cigarettes and other presents. After they became quite familiar with us and friendly, they were subjected to full anthropometric measurements by me. Their blood was also tapped by Mr Sarkar for typing. The presents given were iron nails, strips of red cloth, tea and tobacco leaves. Among all these objects what they liked most were the tobacco leaves. Cooked rice, dal (cooked lentils) and fish curry served to them from the launch Mess were however not much appreciated. With the few Hindi words that they were able to understand, we told them that we would like to visit their camp next morning and meet other members of the party. After the canoes had left, we anchored at this point for the night and after taking an early breakfast we left for the shore in two batches. We were informed by the crew that the creek near the Onge camp was called the *Dugong Creek*. We had to wade through brakish water and coast fringing with coral beds for about two miles, before we reached the Onge settlement. There was one large circular communal hut characteristic of the Onges and several lean-to's (*see* Plate I, Fig. 2). We noticed three canoes on the beach apparently those with which they came to meet us on the previous day. We saw also several small dogs and the entrails of a pig strewn round. We met all the 12 Onges we saw the day before, along with Ukla and his family. In addition there were a number of women and children. We took out our presents of dried tobacco leaves, iron nails and two large fishes that we had caught on our way from Port Blair. These were distributed to the Onges. There were altogether 17 men, 15 women, 4 boys and 3 girls. The children were between 1½ to 4 years. The entire party of Onges behaved towards us in a friendly manner and subjected to our measurements and tapping of blood from their fingers without any protest. We went inside their hut and inspected the settlement very thoroughly. A large number of photographs were taken. We found that the name of this village was *Tambebui*. As it became rather late, we decided to return to 'Molly' in the Andamanese canoes, rather than walk through the coral beds for 2 miles. The Onges understood our signs and gladly escorted us back to the launch. We found there were several other Onges waiting for us in the launch who came from the neighbouring village *Gabilong*. All of these Onges appear to be under the influence of the man nick-named as 'Raja' (*see* Plate IV, Figs. 1-2).

We could not proceed towards Hut Bay as the launch had to return for duty at Port Blair, where we reached at about mid-night.

After reaching Port Blair, I discussed the matter of transport with the Chief Commissioner, Mr Majid. A thorough coastal survey of Little Andaman would take at least 15 to 20 days. As it was found impossible to get either from the Forest Department or from the Harbour Master any of their launches

K 36 [162] there were no Andamanese there, but 400 people consisting of 133 males and 130 females who migrated from Bassein in 1924. They were Karen Christians who had settled there. After A 14 returning to Long Island on the 12th, Mr Sarkar and party left in the motor boat "Return" for a short cruise along the Jarawa country. Besides Mr Joseph, there were Mr Pooviah and a few of his Burman Bush Police armed with rifles and guns. The party passed through the Homfray's Strait and anchored at the north eastern corner of the Spike Island. Loka and his party of three Andamanese accompanied them in their two canoes. They came to the shore A [50] in one of the Andamanese canoes and after entering the forest they found bundles of bamboos piled up at one corner. This was identified as a Jarawa raft. There were also three paddles made out of a palm tree. These specimens were procured for the Department. After proceeding some distance A [34] in the jungle, 19 small fire places were counted in scattered manner. A temporary hut was also noticed at a short distance. A number of objects usually [88] used by the Andamanese tribes for household purposes was found including [411] a sling for carrying babies. A beautiful specimen of a Jarawa Bow painted [53] in red in geometrical designs was also found. Photographs were taken of the settlements of the Jarawa camp and objects collected for the Museum. In another place at *Yeratiajig* remnants of a Jarawa camp including pottery and bones of animals, etc., were found. The party returned to Long Island on 14-3-48 and examined 8 of the remaining members of Loka's party. It left the same day for Port Blair where it arrived at 10 P.M. On the 25th Mr Sarkar and his party with the Deputy Chief Commissioner Mr Gupta, left for Kar Nicobar where it arrived on the following day. It returned to Port Blair after staying for a few days. During this time in Kar Nicobar, besides studying the Nicobarese of the Island Mr Sarkar met two Jarawa children who were captured and brought over there and placed in a local Mission School for education.

In the following year in January 1949, another small party was sent under Dr A. K. Mitra with Messrs H. K. Bose and A. Bhattacharyya, to continue A [36] the survey of the Little Andaman further along the eastern coast. They visited *Hut Bay* on the 28th and went to the Onge settlement there. A large [34] circular hut similar to that seen by us at Tambebui was observed. It contained [35] nine cots with a fire place in the centre. There were also two outrigger canoes, [36] one in front of the hut and another on the beach. Altogether 11 Onges were [16] found consisting of 2 adult males, 6 females and 3 young children between [12] the ages of 6 to 15. The 8 adults and the adolescent boys were carefully measured and observations noted about their special somatic characters. After leaving Hut Bay they went as far as the South Point which is the southernmost point on the eastern coast of the Little Andaman, but did not see any other Onge settlement. They had to return on the 31st as the launch could not be spared any further.

A [14] The Onges were found to be strong and healthy and free from venereal [16] disease, a scourge, which along with tuberculosis were chiefly responsible A [14] for the rapid depopulation of the Andamanese tribes. Our observations agree with the accounts of the Negritos of the Andaman Islands published before

A 114 Gates (1948) is of opinion that: "The blood groups of Negritos and Australoids must have been very different then, as they are now, the former being high in B, the latter having A without B".

Earlier Negrito data from other sources, as also the results of this investigation, do not support the above contention. Both the Australoids and the Negritos have been found to be high in A. The Negrito peoples of the A 143 Andaman Islands, although they are now isolated in the different islands, 144 probably all belong to the same ethnic stock and when their blood group data are pooled together the following percentages are obtained :—

	O	A	B	AB	Total
Total . . .	13	36	7	6	62
Negritos*(Andaman Islands) . . %	20·97	58·07	11·29	9·67	

A [162] The total number of 62 consists of 34 Onges from Little Andaman, 22 Andamanese, 6 Jarawas. When the 22 Andamanese, who are definitely known to be mixed, are exempted from the above total, the position is as follows :—

	O	A	B	AB	Total
	11	23	2	4	40
%	27·50	57·50	5·00	10·00	

It thus appears that more than half the Negrito population belong to group A and their similarity with the Australians in this respect, associated with the enormous differences in physical features between the two, still remains to be satisfactorily explained.

Nicobarese Blood Groups

N 144 193 [174] The Nicobarese blood groups present a picture so far unknown to S.-E. Asia. The high frequency of O is characteristic of the American Indians. The Nicobarese are believed to have migrated into their present habitat from Lower Burma. Little is known of blood group distribution from Burma. Mollison and Reddy (1946) have published a set of data from 229 peoples, comprising 155 pure Burmans, 57 Karens, 13 Chins and 4 Kachins. They show the following blood group distribution :—

O	A	B	AB
36·2	26·2	29·7	7·9

* Chaudhuri's sample of 5 Onges (Gates, 1940) could not be combined with the present author's sample lest the same person is included in both the data. There are chances of such duplication in small populations as such.

6; Cipriani E-5 (1951-1953)1961 AZ2 Andamans AZ2
Onge

documented the fact in a number of photographs. The purpose, however, is purely hygienic. an unpainted body is, in their opinion, exposed to certain illness. They explained this belief to me by saying that without paint the body becomes "hot". The men who travelled with me far from women were anxious every day to spread clay on face, chest and limbs, just to avoid "heat" or, in other words, fever. I thought of malaria, but they do not suffer from it. Of this I will speak later on.

Rough clay is applied daily, on infant bodies as well as on adults, for health purposes. It is used to cure all kinds of sickness, together with ochre, turtle fat and honey. Honey spread on wounds appears to hasten healing. Identical curative methods are employed in Oceania. They probably existed among the Tasmanians, and are still used in Australia by the aborigines. I found nothing of the kind in Africa, where honey is plentiful. The Onge consider clay, ochre, honey and turtle fat good for external and internal treatment alike - both preventive and curative. Powdered bees' wax of a dark colour is often added. I saw mothers give their children, as a laxative, a number of pills made of similar ingredients. No bigger than common hazelnuts, the pills are red and greasy. In Onge forests I saw some small excavations, a few feet deep, made to extract the medicinal clay from special ground pockets. In its natural form the clay is light coloured, powdery and free of stones. When it is burnt the colour changes, assuming red, yellow, whitish or black shades according to the different qualities used, all believed to possess healing properties and to ensure hygienic colouring of the body. Mixed as described above, clay is used by the Onge in every circumstance from fever to snake or scorpion bite, constipation, breast infection in women, or post-delivery bleeding.

Belief in the medicinal properties of clay is as old as humanity itself. Even among contemporary European peoples, notwithstanding severe criticism, clay is still honoured as health-giving, not, I must say, on wholly foolish grounds. The Onge, who smear their bodies constantly with clay, have the softest, most velvety skin that I ever saw anywhere in the world. Wounds spread with clay mixed with honey and fat leave negligible scars. The laxative and germ-killing action of clay is admitted by physicians in many countries, including Europe. It never causes infection. Geophagism has ancient origins, and we find it practiced by many modern populations. Children of every race and all young wild animals lick clay instinctively to absorb the mineral salts required by a developing organism. The Onge habit of using clay for healing purposes can be set, therefore, in a very wide frame.

Mental and nervous disorders are rare in Little Andaman. Few natives are subject to epilepsy – an important matter for the Onge: they consider such people as possessed by spirits who speak through their mouths, and respectfully question them as oracles. Several Onge chiefs, such as Chief Tchôtã of Tambẽ-ẽ-buiẽ, are apt to go into trances that have all the appearance of epileptic fits. They were elected chiefs on the strength of their epilepsy!

Constant exercise keeps eyesight and hearing extremely sharp in the Onge. I saw no single case of myopia or presbyopia among the natives, nor

7:Sarkar D-4, 5 (1948) 1960 AZ2 Andamans AZ2
Onge

Onge Population and Settlements. — **Introduction.** — Since the opening of the Andaman sub-station of the Department of Anthropology, Government of India, the Little Andaman Island has been visited several times by anthropological experts but the sum-total of knowledge has been rather meagre. We have not yet been able to know accurately the total Onge population. The recent paper by CIPRIANI [1] (1956), on the other hand, gives a hitherto unknown picture of the biology of the Onge population. The latter appears to show, as will be obvious from the data presented below, a high masculinity while CIPRIANI's method of population census shows high feminine population.

Earlier Data. — In a discussion of this nature we can leave aside the Onge population *estimated* at the decennial Censuses and take into account those actually seen and counted. In 1911 the number of Onges actually seen comprised :

adult male	118,	adult female	78
child male	62,	child female	28
	180		106

thus giving a total of 286 individuals. This shows a 10.20 % excess of males in the case of adults and an excess of 18.89 % males in the case of children.

During the Census of 1921, a total number of 99 individuals was counted at the following places :

	Rutland Island	Tochiewe	Toibalawe	Toreadda [2]	Total
Adult male	27	6	6	5	44
Adult female	18	–	5	3	26
Child male	8	1	3	5	17
Child female	8	–	2	2	12
	61	7	16	15	99

Eighty Onges were counted in 1911 on Rutland Island, which number decreased by about 24 % to 61 in 1921. No Onges were reported from the same island during the Census of 1931 and at present there appears to be none, either. The details of the 80 Onges reported in 1911 are unknown.

The Rutland population of 1921, however, shows an excess of 10 % adult males while the child population shows the two sexes in equal numbers. The total population, actually seen in 1921, shows an excess of 12.86 % adult males while it is 8.62 % in the case of children. Compared with the 1911 population it appears that the adult male excess has increased by 2.66 % in 1921 while the child population shows a favourable decrease by 10.37 %.

Recent Data. — On February 25, 1948 during the first trip of the Department of Anthropology [3], 38 individuals were counted before the communal hut of Tambebui, which comprised 17 adult males, 15 adult females and 6 children, 4 males and 2 females. The higher number of males among both the adults and children is apparent in this small sample. The above 38 individuals comprised 4 persons, 2 males and 2 females, from the communal hut of Laito, which had been visited by the above party the day before. The total population of the communal hut of Tambebui is probably 34, which is in striking contrast to the population of 4 souls for the communal hut of Laito.

GUHA also mentions the January, 1949 trip by the Department of Anthropology into Hut Bay, towards the south of the island, where 11 individuals, comprising 2 adult males, 6 adult females and 3 children (sex not mentioned) were seen in the local communal hut. The latter contained 9 sleeping places only.

The 1952 and 1953 parties of the Department of Anthropology were led by LIDIO CIPRIANI. His account is difficult to follow. There are very few relevant data regarding

[1] LIDIO CIPRIANI, Report on a Survey of the Little Andaman during 1951-53. Bull. Dept. Anth. 2. 1956, pp. 61-82.
[2] So spelt in the 1921 Census.
[3] B. S. GUHA, Report of a Survey of the Inhabitants of the Andaman and Nicobar Islands during 1948-49, I. Calcutta 1952, pp. 1-7.

7: Sarkar D-4, 5 (1948) 1960 AZ2 Andamans AZ2
Onge

the actual Onge population. He has estimated the population instead of giving a simple population figure for each of the Onge settlements he visited. His estimates are based on the number of sleeping places in a hut, though nothing definite could be found either with regard to the total number of communal huts or the sleeping places. Then, to find out the sex of the individuals from the sleeping places seems preposterous. CIPRIANI (1956) estimates the total Onge population to be 607, comprising "229 adult men, 241 adult women and 137 children". He was able to determine the sex of the children in about 80 % of the cases, since immediately after the above quotation, he states: "Of the latter 48 are boys, 62 girls, and of 27 sex could not be ascertained". In the same paper and just two sentences before, where he gave the above figures, he mentioned a total of 497 individuals, comprising 242 men and 255 women. If the latter figures are meant only for adults then with the addition of 137 children to the above adult population of 497, the total Onge population appears to be 634. Even then the discrepancies in the adult population remain to be explained; it adds up to 470 (229 males, 241 females) once and to 497 (242 males, 255 females) another time.

The only thing that has some value in the demography of the Onges is that he has collected personal names of 107 adult males and 105 adult females. It is not known why the children have been excluded. At any rate, the personal names indicate a slightly higher number of males (50.5 %) than females while the total estimate for adults shows a hitherto unknown Onge sex ratio. With an adult population of 229 males and 241 females, the sex ratio works up to 48.7 % males and 51.3 % females.

Population estimates are always hazardous and, from all reports, the Onges appear to be a dwindling population. R. F. LOWIS, the Census Superintendent for the Andamans during 1911 and 1921 was frank enough to admit in 1921 that his 1911 estimate was "too high", though he gave one for 1921.

It is surprising that neither the Andaman Government nor the Department of Anthropology provided CIPRIANI with an assistant, trained among aboriginal people, who could have been of much help to him. At least the Onges could have been counted in each of the localities visited.

Settlements. — The typical Onge settlement is the communal hut, which is usually located on the beach. CIPRIANI mentions the communal huts in the interior of the island, but does not describe their details.

During the 1911 and 1921 Censuses coastal trips round the island were made and the former Census provides a very good map with the names of twenty settlements scattered on the island. The names are: 1) *Tambeibui*[4], 2) Uede, 3) *Nachuge*, 4) Tochiewo, 5) Tochengedu, 6) Quoname, 7) *Geejege*, 8) *Ingoi-tijala*, 9) *Endea-geleda*, 10) To-to-bwe (unoccupied), 11) *Titugalanle*, 12) *Toibalawe*, 13) Tordeada (unoccupied), 14) *Kwanle-tu-kuage*, 15) Koreale, 16) Porale, 17) *Chetamale*, 18) *Titaiye*, 19) Ogechai, 20) Obate.

The names of the settlements visited during the 1921 Census are given at the beginning of this paper. It was also mentioned that 14 huts were seen in comparison to 19 (this will probably be 20) in 1911. The names of 15 settlements could be gathered from the Census Report of 1931 and the 10 settlements italicized above can be rather easily correlated with those of 1911.

CIPRIANI's map is again difficult to follow. Firstly, he has not given any idea of the medium of language by which he communicated with the Onges. He has located in his map 18 existing coastal huts, of which the name of one between Otirubara and Benyaboi is missing. The position of the "supposed" huts within the jungle is misleading. Was he equipped with surveying instruments? Then he mentions 11 huts which are "no more in existence". How were they recognized? In what earlier context have they been identified as such? Only five of the eleven names (Obate, Palalankwe [or Kwalalanque, according to CIPRIANI], Ogechai, Ingoi-tijala and Chetamale) could be correlated with earlier records. Of the 20 coastal huts listed by him four (Nachuge, Geejege [or Gaje, according to CIPRIANI], Titaje and Tambeibui) could be correlated with the names of the 1931 Census map.

[4] So spelt in the 1911 Census.

7:Sarkar D-4, 5 (1948) 1960 AZ2 Andamans AZ2
Onge

and seven with those of the 1911 Census. The total number of twenty existing huts, however, agree in both CIPRIANI's map and the 1911 Census map; only names differ. It would have added greatly to our knowledge had CIPRIANI based his investigations on the 1911 Census map and commented on each of the place names given therein. He also mentions two huts in ruins besides eleven "no more in existence". There is no mention of any newly built hut. All this proves the decadent condition of the Onges. The coastal huts are probably more numerous than those within the jungles and their total number appears to be constant both in 1911 and in 1953.

The Onges have, in recent years, been visited so many times by anthropologists that a well-directed effort could have brought the whole population into a few genealogies — an elementary task in anthropology.

Postscript. — CIPRIANI has now (1959) published[1] the Census figures of the different communal huts. Instead of clarifying the earlier anomalies stated above, his recent population figures have raised further complications, as will be discussed below.

CIPRIANI now (1959) mentions in a footnote on p. 89 of his paper that 125 individuals, comprising 48 adult males, 44 adult females, 22 boys and 11 girls, *have beds in different communal huts*. He gives a total population figure of 394 (130 adult males, 129 adult females, 65 boys and 70 girls) obtained by actual Census from 21 communal huts. To this total figure of 394 he adds another total of 175 individuals (adult males and females 74 each, and 27 children, the latter shown as "males" on p. 90 but as "siblings" on p. 76) estimated for another 7 communal huts. Thus according to a Census of 21 huts and an estimate of 7 others, CIPRIANI now finds a total Onge population of 596, in comparison to his earlier variable figures stated above. There is no attempt to explain the discrepancies in the population figures. It is also unknown why the population of the 7 huts could not be censused, although all of them were visited between March 22 and April 4, 1953.

It is now apparent that his method of Census of the Onges is untenable since about 31.7 % (125 out of 394) of the population have beds in different communal huts. This is in harmony with the roving nature of the Onges, but it shows that only about one third of the population is migratory and about two thirds sedentary. This is probably not true for the Onges. At least, the fixed nature of beds in the communal huts loses its significance and is probably an uncertain criterion for an Onge Census.

As to a recalculation of the Census figures for each of the 21 huts, it is seen that the total population appears to be 382 (129 adult males, 126 adult females, 64 boys and 63 girls) instead of 394 given by CIPRIANI. This definitely shows high masculinity not only among adults but also among the children. With an adult population of 129 males and 126 females the sex ratio works up to 50.6 % males and 49.4 % females, the excess of 1.2 % being statistically significant.

In the present publication CIPRIANI has published personal names of 133 adult males and 140 female adults, but the Onge habit of frequently changing names, mentioned by him on p. 70, has not been substantiated. Since the same issue of the journal contains an anthropometric study of the Onges, in which names of the individuals measured were noted, it would have been worth while testing how far the Onges practise the above custom. As will be obvious from the foregoing as well as from this P. S., CIPRIANI has not started with the known to unravel the unknown.

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[1] L. CIPRIANI, A Survey of Little Andaman during 1954. Bull. Dept. of Anthr. 3. 1959, pp. 66-94.

10: Sen K-3, 4 (ca. 1955) 1962 AZ2 Andamans AZ2
Negritos

food lie in a chain running from north to south along the islands between Little and Great Andamans. This has been one of the most convincing proofs of the movement of the aborigines from the south to the north. Cipriani writes, 'All these organisations, with geographical names, camps, places for water and food, indicate an ancient navigating experience moving from the south to the north. About a century and half ago the Jarawas are said to have still been in possession of canoes and the same is said of the savage inhabitants of the North Sentinel Island less than 50 years ago. In a surprisingly short period the technique of making canoes seems to have been completely forgotten as a result of the difficulties of using them.'[2]

THE ABORIGINES OF THE GREAT ANDAMAN GROUP

Andamanese, as they are called, were the most widespread and the largest in number. They had split up ultimately into a few sub-groups from the north to the south. The different groups are *Aka-kora, Aka-boa, Aka-jeru and Aka-bea.* There has been a deplorable decline in the number of these aborigines who in the bygone ages exceeded all other groups in number. At present the number is only 23, a considerable reduction from the number 625 only in the beginning of the 20th century. Though the present importance of the Andamanese because of the extremely poor number is far from significant, they are of no small interest for the study of the anthropologist, especially the impact of these people with the later settlers.

The consequences of the impact of the outsiders on the Andamanese have been far from satisfactory. With the formation of the penal colony, the aborigines continued to develop feud and on the 14th of May, 1959 a clash between the aborigines and the Govt. occurred which is known as the Battle of Aberdeen. Aberdeen is at the heart of the town of Port Blair. Efforts of pacifying these aborigines were made and for bringing them into closer terms of amity, the 'Andamanese Home' was started in 1863 by Rev. H. Corbyn Chaplain. They were employed for working with the convicts taught to speak English and wear clothes. The consequence of such an impact has been alarmingly devastating because of the infiltration of a number of vices and diseases which only paved the way for their impoverishment and decay (For further particulars see demographic characteristics).

2 Cipriani, L — On the origin of the Andamanese, Andaman & Nicobar Islands, Census of India, 1951.

10: Sen K-3, 4 (ca. 1955) 1962 AZ2 Andamans AZ2
Onge

rather than order is given by the leader. Cipriani observes.[1] "For instance, it is very amusing for them to think that a man gives orders to others. This means that they have no real chiefs. A so-called Onge chief, or raja, is only the head of a group of families living in the same communal hut, and giving not orders but only advice. It is the most experienced man who is considered chief in the hut, but his authority if at all never goes beyond that hut. In other words no real chief exists in the Little Andaman. Notwithstanding this, there is a perfect order in the island, because nobody interferes with the work or encroches upon what can be considered the rights of others."

As is common to most of the aborigines, the Onges are generally not very receptive when the questions about their numbers and other groups are enquired. The headman says that there are many many fifty Onges. However the number of the Onges are approximately 600.

As regards the mode of living of the Onges, the hunting and collecting are the basis of their economy. The domestication of the plants i.e. art of agriculture is not known to them and it is only 30 years back, the dogs arrived in the island and have been domesticated by the Onges for chasing the pigs, their main prey. In the absence of agriculture, the natural products of the sea and the forest provide them with all their items of diet. Animal and vegetable products and honey are the main items of their diet and there has been, so far, no introduction of salt in their diet. The most important victims of their hunting are pigs and turtles, the former is chased by dogs and are killed with great cruelty. The cooking of the fish, meat, roots, tubers, jackfruits etc are done by putting them under fire. Preservation of foodstuffs is not widely practised except the jackfruit seeds which are tied up in a small net inside water on the bank of some stream and taken out during rainy season, when the other vegetable foodstuffs are not available. On the whole, the Onges have a very balanced diet with a fair richness of all the nutrients. In this connection the observations of Dr. Cipriani during his survey in the Little Andaman throws considerable light in their conditions of life. He has estimated the Onges as one of the happiest people of the world, who in spite of their primitive economy, are not the miserable victims of poor health, ill nutrition and oddities of life.

Some amount of artistry and craftsmanship have developed among these people. A canoe can be constructed by a man, all by himself from

1 Cipriani, L—Survey of Little Andaman during 1954; Bul. Dept. Anth.,

10: Sen K-3, 4 (ca. 1955) 1962 AZ2 Andamans AZ2
Negritos

yond doubt that the impact of the people having better material culture on the aboriginal population has resulted in an acceleration of their decay. The aborigines of the Great Andaman Group are the first people in the islands to come in contact with the later settlers and the early incorporation of many of the vices of these new comers have resulted in the furtherance of their decay. Such devastating effects are also observed in the case of many other aboriginal groups. The Red Indians of U.S.A. and the native population of Malanesia are only a few among the many others who are such victims of decline, more so immediately after the impact of the later settlers.

Whatever inadequate data are available about the number of aborigines and the other demographic characteristics, they show the nature of imbalance which stands in the way of their successful growth.

Table No. 1*

The aboriginal population.

Tribe	1858	1885	1901	1911	1921	1931	1941	1951
	100		39	36	17	7		
Karo	500		96	71	48	24		
Tabo	200		48	62	18	6		
Yeve	700		218	180	101	46		
Kede	500		59	34	6	2		
Juwai	300	2000	48	9	5	0		23
Koj	100		11	2	0	0		
Bojigyab	300		50	36	9	1		
Bea	500		37	19	1	0		
Belawa	300		19	15	4	2		
			625	464	209	88		23
Onge	700	1250	672	631	346	350		600
Jarawa	600		585	231	231	170		350
	4800	3250	1882	1326	786	608		973

In spite of the fact that the data of the aboriginal population, as given in the Table No. 1, is far from accurate, a very good idea of the nature of decline of the aboriginal population can be assessed. As is evident from the Table, the population of 4800 in 1858 has reduced to 608 in 1931 in less than 75 years.

* The figures are not at all accurate.

10: Sen K-3, 4 (ca. 1955) 1962 AZ2 Andamans AZ2
Negritos

The Andamanese are almost non-existent and at present only 23 are surviving. Sri Shivdasani writes,[1] "I met only 20 of them in the camp at Long Island and was surprised to see that the youngest child there was about 9 years old, possibly a half breed". This goes a long way to prove the extremely poor fertility of the Andamanese. This has been further substantiated by Dr. Sarkar on analysis of the reproductive capacities of 100 aboriginal women of the Andamans from the original data collected by Portman.

Table No. 2

Reproductive lives of the Andamanese Women.

	North Andamanese	South Andamanese
No. of women	50	50
Less married	4	1
	46	49
Unproductive marriages	21	17
	25	32
Average children per mother	2.86	2.81
Average living children per mother	0.92	0.38
Sex-ratio	39m : 20f	52m : 38f
Net reproductive index	0.36	0.16

Source. Sarkar, S. S.—The origin and migration of the Negritoes in the Andaman Islands, Man in India, Vol. 33, No. 4, Oct-Dec, 1953.

As is evident from the above table, of the 100 women, 38 had unproductive marriages and 5 remained unmarried. The case of 43 women out of 100 can easily be set apart because of their unproductivity. This high percentage of unproductivity is really an alarming factor and the average number of children per mother is 2.83 but the average number of living children per mother is less. This ultimately results in a decline in the population number.

The Jarawa population, according to the 1951 census, is estimated in between 300 and 400. Further details about their demographic characteristics are not available.

1 Shivdasani, H. R. Report of the possibilities of colonisation and development of the Andaman & Nicobar Islands, 1949.

10: Sen K-3, 4 (ca. 1955) 1962 AZ2 Andamans AZ2
Onge

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114 The Onge population has been estimated by various authorities and the surveys of Dr. Cipriani have brought to light some important characteristics of the Onge population. Cipriani has ascertained the total Onge population to be 607, of which 229 are adult males, 241 are adult women and 137 children. Of the 137 children, he has detected 48 boys and 62 girls and about the rest he is not sure. However, the procedure followed by Cipriani and the conclusions derived by him, which are contrary to the previous knowledge, have been vehemently criticised by Dr. Sarkar.[1] Sarkar opines that the procedure of enumeration by counting the number of sleeping places in a communal hut is liable to gross errors because of the roving nature of the Onges of whom an appreciable number has no sleeping place. The determination of the sex-ratio from the communal huts are also more difficult. As a matter of fact the precision of enumeration, as is apparent from the census of Cipriani, cannot be attained and the deficiencies in the procedure of Cipriani have very well been brought to light by questioning and ultimate rejection by arguments. He writes that, 'His (Cipriani's) account is difficult to follow. There are very few relevant data regarding the actual Onge population. He has estimated the population instead of giving a simple population figure for each of the Onge settlements he visited. His estimates are based on the number of sleeping places in a hut, though nothing definite could be found either with regard to the total number of communal huts or the sleeping places. Then to find out the sex of the individuals from the sleeping places seems preposterous. Cipriani (1956) estimates the total Onge population to be 607, comprising 229 adult males, 241 adult women and 137 children. He was able to determine the sex of the children in about 80% of the cases, since immediately after the above quotation he states: 'Of the latter 48 are boys, 62 girls and of 27 sex could not be ascertained.' In the same paper and just two sentences before, where he gave the above figures, he mentioned a total of 497 individuals, comprising 242 men and 255 women. If the latter figures are meant only for adults then with the addition of 137 children to the above adult population of 497, the total Onge population appears to be 634. Even then the discrepancies in the adult population remain to be explained; it adds up to 470 (229 males, 241 females) once and to 497 (242 males, 255 females) another time.

Secondly, the enumeration of Cipriani shows a higher feminine population, whereas as analysed by Dr. Sarkar, all the previous estimates

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1 Sarkar, S. S—Analecta et Additamenta, Anthropos 55, 1960.

10: Sen K-3, 4 (ca. 1955) 1962 AZ2 Andamans AZ2
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of the Onges actually seen, show a predominance of males. The determination of sex-ratio by Cipriani is no doubt very much speculative in nature and as is evident from the extract of the comment of Dr. Sarkar, Cipriani himself has been contrary to his own versions, at times. All the previous censuses of the actual Onges met and counted show a predominance of males and this happens to be the logical argument of Dr. Sarkar to conclude that the Onges population has been characterised by high masculinity. High masculinity always imply a very high predominance of males over females but never in the previous censuses we find such a high predominance. The census of Cipriani shows a slightly higher number of females than males and the attainment of such a slight predominance of females over males is never a physical impossibility. As such we may believe that there may be a slight predominance of females over males though the procedure adopted by Cipriani is by no means a precise one.

Dr. Sarkar, though apparently justified, totally rejects the procedure of Cipriani. Census of population is in itself a very difficult job and it is always liable to errors even in the advanced countries. Therefore, the enumeration of Dr. Cipriani is highly praiseworthy and because of the difficulties of contacting all the Onges the enumeration of the communal huts and the number of sleeping beds are no doubt very important clues for an intelligent guess about their number.

Though Dr. Sarkar pleads for the predominance of males by taking into account the number of Onges actually seen and counted (which show a predominance of males), the research expeditions undertaken by Sri R. C. Nigam[1] under the auspices of the Anthropological Survey of India in March, 1955 and December, 1956 made him fairly well-acquainted with the island of Little Andaman. From his own actual counting, a higher number of females have been counted than males. He was able to contact 161 Onge individuals of which 138 belonged to the 45 family units and the rest were 'unattached'[2] individuals i.e., widows, unmarried

1 Nigam, R. C.—Little known tribes of the Andaman Islands—Their problems and prospect; Vanyajati; Vol. VIII, January, 1960, No. 1; Vol. VIII, April, 1960, No. 2 and Vol. VIII, July, 1960, No. 3.

2 A family is considered to be comprised of parents and children whereas, if the father or mother of a family is dead, the members have been called as 'unattached' type by R. C. Nigam.

10: Sen K-3, 4 (ca. 1955) 1962 AZ2 Andamans AZ2
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162 boys and girls and children of the widows. The break-up of the total population is given below.

Table No 3

	Male	Female
Adult	46	61
Child	30	24
	76	85

On the consideration of the total population, there is a 5.6% excess of the female population over the male population.

However, the further break-up of the total number of Onges counted by Sri Nigam reveals some of the most important demographic characteristics of the Onge population. Considering only the 45 family units, it is found that there is a preponderance of males over the females as is evident from the table below.

Table No 4

	Individuals			Children		
No. of families	Male	Female	Total	Male	Female	Total
45	75	67	138	26	22	48

162 589 The Onge of the 'unattached' type, therefore, are comprised of 5 males and 18 females. Of this 10 are widows. So the predominance of the females among the Onges may be due to a higher percentage of widows whereas the widowers are much less in number. This throws another 165 important light on the logevity of the Onge males and females. The females, as it stands, have a longer life than males and this is not only a very important aspect of the Onge population but also of the other tribes of the world. In Africa also such a higher longevity of the females is discernible which is due, as is commonly believed to higher resistive power of the females to fight the odds of life compared to the males.

163 The fertility of the adult females are also extremely poor. He writes[1] in 'the total of 61 adult females there were 10 widows who were too old for child-bearing, 4 married women with their child-bearing period finished, while there were 8 married women with no possibility of any issue. Thus

1 Nigam, R. C.—Little known tribes of the Andaman Islands—Their problems & prospects; Vanyajati, Vol. VIII, July, 1960. No. 3.

11: Cipriani E-3 (1951-1955) 1966 AZ2 Andamans AZ2

162 The population of the Andamans, on the other hand, is now almost entirely of recent immigration: there are no Europeans permanently resident, but a large number of colonists of Indian, Burmese or Malayan origin have made their home in the islands. In the Indian census of 1931, the entire stable population of the Andamans and Nicobars was assessed at thirty thousand, 18,962 in the Andamans and 12,009 in the Nicobars, not counting the Shom-Pen. The few aboriginals remaining in the Andamans are anthropologically of extreme importance. Classified among the Negritos, or Asiatic pygmies, they are one of the few surviving groups of pygmies who in the past were widely scattered all over the world. They can be divided into three groups, clearly distinguished one from the other by their mode of life, their present genetic isolation (although they certainly all originated from a common stock) and their attitude towards outsiders:

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131
648

1 The Arioto, the friendly Andamanese, once very numerous along the coast of Great Andaman and now reduced to only twenty-three individuals of pure stock; now almost completely sterile, they are near to extinction. They manage to survive only because of the help given to them by the Indian Government, which has established small camps along the coasts of Middle Andaman.

2 The Jarawas, still implacably hostile to foreigners, living a nomadic existence in South and Middle Andaman. One solitary group occupies a tiny island thirty miles west of South Andaman, surrounded by seas so stormy that they are frequently impassable. This is known as North Sentinel, to distinguish it from South Sentinel, twenty miles to the south and uninhabited. Landing on North Sentinel, as indeed penetrating anywhere on Great Andaman, has hitherto always entailed vicious fighting with the Jarawas, who are determined to repulse any stranger from their last refuge. They are well sheltered by an unbelievably dense forest, which has so far made it impossible to subdue them, though there are today probably no more than two hundred surviving.

3 The Onges, sole inhabitants of Little Andaman, into which they have withdrawn. There are not more than five hundred surviving today, and these are in a state of serious demographic decline. It is probable that before 1932 no one had ever approached their camps in the interior of the island. Until the present day, they

11: Cipriani E-3 (1951-1955) 1966 AZ2 Andamans AZ2

have always been protected by the sea, which is almost invariably rough, and by a thick tropical forest which extends without a break over more than a thousand square kilometres, unpenetrated by outsiders and almost impenetrable.

THE ARIOTO

The decline of the Andamanese began with the first landing of foreigners on the island and is similar to that of so many other primitive peoples who have come into contact with civilization; a detailed account of their decline would be long and pitiful. In the case of the Andamanese, however, demographic influences arising thousands of years ago must also be taken into account. Cut off by circumstances into small groups and separated at random by large expanses of sea or by the impenetrable forest, they gradually developed somatic and cultural differences of the greatest scientific interest. Among other things, languages became modified to such an extent that members of different groups are unable to understand one another. The Onges, for example, who in my opinion are the nearest relations of the Jarawas, are quite unable to understand their language.

The peoples of Great Andaman were the first to encounter civillization, when from 1858 onwards the Indian Government, them in English hands, decided to institute at Port Blair a penitentiary for the many political prisoners after the famous 1857 mutiny. Subsequently the government sent over convicts serving long or life sentences. The life of the deportees was atrocious during the first few years, owing to malaria and the absence of medical supplies. To the majority, therefore, deportation to the Andamans meant a death sentence. Even today the only large brick building in the Andamans and Nicobars is the penitentiary at Port Blair.

Before the building of the penitentiary the English had made several desultory expeditions to the Andamans, and even before them other foreigners had landed on the archipelago. It is known that Marco Polo, probably passing within sight of the archipelago in 1292, gave it the name of Angaman, and declared the inhabitants to be ferocious cannibals with dogs' heads. As a result, even the Asian pirates were for centuries afraid to land on the islands. The barbarous forays of Arab slave traders later awoke in the islanders

11: Cipriani E-3 (1951-1955) 1966 AZ2 Andamans AZ2

The Onges are the most numerous of the three peoples surviving in the Andamans. Vigorous and apparently full of promise for the future they may well offer a suitable field for the application of eugenic measures designed to increase their numbers; this would be impossible with the Jarawas owing to their hostility towards outsiders, and the few remaining Arioto are nearly all of impure stock. If their confidence could be gained, it might be possible to encourage inter-marriage between the various groups, in the hope that fertility would increase and the ultimate total extinction of Onges, Jarawas and Arioto, would be prevented.

In the Andamanese, this physiological decline has been accompanied by cultural decadence, as my digs in the kitchen-middens all over the archipelago showed. The ancient pottery which came to light is proof enough; when one compares it with recent work the latter is indicative of secondary and not original primitiveness. The successive strata in the deposits show a gradual decline from earthenware clearly made from a very refined mix to crude ware with vegetable impurities and bits of stone left in the clay. The pots dating from ancient times were clearly well fired and the quality of the clay allowed them to have thin but nevertheless very strong walls. In the present-day ware, on the other hand, the wall has to be thick because of the coarseness of the clay, making the pots both heavy and easily broken. Moreover, firing is limited to drying the pots in the sun, and the clay is in fact only hardened when the pot is used for cooking.

Ignorance of fire-making in the Andamans may also stem from this cultural regression, as one of the effects of physiological and psychological decadence. Given the absence of magico-religious beliefs among the Andamanese, ignorance of fire-making cannot be attributed to any ritual taboo or veto. On the other hand, it is in sharp contrast to the possession of elements of cultural advance such as the bow, with highly developed arrows, the harpoon with its detachable point, and the outrigger canoe.

Few races are known, even in far distant times, which never had fire. *Sinanthropus* and nearly every fossil Man after him had fire, even if he was unable to create it and could only preserve it once received from some natural combustion. The Onges, while retaining a number of ethnic characteristics of the Palaeolithic era, have

6:Spate N-4 (no date)1954 AWI India
Andamans A22

mariners from massacre. Despite efforts at conciliation there was violence on both sides; attempts were made indeed to settle some of the more friendly groups in an 'Andamans Home' as fishers of trepang (sea-slug) and collectors of edible bird-nests, both for the Chinese market. But the only result was to civilise them out of existence, largely by venereal disease.[52] The Andamanese are—perhaps one should say were—Negritos, and as they represented perhaps the nearest approach to a 'pure primitive' society, both ethnically and culturally, these hunters and gatherers have attracted anthropological attention out of proportion to their numbers.[53]

Transportation of convicts to the Andamans began after the Mutiny. Latterly there was a change of emphasis, hopeless criminals being re-transported to India and the settlement becoming in effect an open prison for young men condemned to life sentences for more or less excusable homicide. After a few months in jail convicts were allowed to become wage-earning employees of Government, to wear ordinary dress, and to marry or bring out their wives. These changes were reflected in the sex composition of the population: 15,158 males to 2980 females in 1901, 14,872 to 6444 in 1941. The cultural landscape also changed: "Everywhere the ephemeral huts of former times are giving way to well-constructed two-storeyed houses of sawn timber and iron roofs," and a good deal of reclamation of malarial swamp took place around Port Blair. The communal composition of the population was an odd reflection of social conditions: in 1941 Muslims were about a third, largely Moplahs from Madras deported after their 1921 rebellion; Sikhs were 3·5% against an All-India total of 1·5%, Buddhists—i.e. Burmese—over 13%. This corresponds to the prevalence of dacoity in Burma and to the Sikh *penchant* for "liquor, love, and fights".

Practically all the economic development is in the Settlement of Port Blair, an area of about 500 sq mls in the S of South Andaman; here is 90% of the population, the remainder being in forest camps. About 75,000 ac. are more or less cleared, of which about 10–15,000 are cultivated and as much grazing land. Paddy and coconuts each account for about a third of the cultivation, and there are (or were) struggling plantations of rubber and coffee, negligible in area.

The war and the Japanese occupation saw a fall in population to about 16,000, and on re-occupation the penal settlement was formally abolished. From time to time schemes of Anglo-Indian agricultural settlement have been mooted, and in March 1948 a batch of 132 families displaced from E Bengal arrived. It may be noted that some Burmese politicians periodi-

[52] 1931 Census Vol. II (Andamans and Nicobars), 11–23.

[53] The classic treatments are those of Sir Richard Temple in the 1901 Census and of A. R. Brown in *The Andaman Islanders* (1922). There is unfortunately little geography in the latter book; what there is is largely summed up in L. Garrard's 'sociograph' in *Studies in Regional Consciousness and Environment* (ed. I. C. Peate, 1930), 82.